

THE ANNALS  
AND  
MAGAZINE OF NATURAL HISTORY.  
[NINTH SERIES.]

---

“..... per litora spargite muscum,  
Naiades, et circum vitreos considite fontes:  
Pollice virgineo teneros hic carpite flores:  
Floribus et pictum, divæ, replete canistrum.  
At vos, o Nymphæ Craterides, ite sub undas;  
Ite, recurvato variata corallia trunco  
Vellite muscosis e rupibus, et mihi conchas  
Ferte, Dea pelagi, et pingui conchyliis succo.”  
*N. Parthenii Giannettasi, Eol. 1.*

---

No. 1. JANUARY 1918.

---

I.—*On new African Curculionidæ.*—I.  
By GUY A. K. MARSHALL, D.Sc.

[Plate I.]

Subfamily *BRACHYDERINÆ*.

*Sympiezomias cuprevirens*, sp. n.

♂ ♀. Colour black, with dense bright green scaling above and a narrow coppery stripe running from the front margin of the prothorax to the apex of the elytra; on the prothorax there is sometimes a faint trace of a lateral stripe which is continued on to the base of the elytra; in some cases the upper surface is coppery, with a narrow lateral green stripe on both prothorax and elytra; the lower surface in either case rather brassy.

*Head* with very sparse shallow punctures which are quite hidden by the scaling, the forehead with a faint central stria continuous with the rostral furrow. *Rostrum* a little longer than its basal width, parallel-sided, the dorsal outline rather strongly curved; the upper surface almost flat transversely, with a deep narrow central furrow in the basal half and a broader shallower lateral one on each side flanked internally by a low carina; below and parallel with this a short furrow in front of the eye. *Antennæ* piceous; joint 1 of the funicle

as long as 2+3+4; joint 2 about as long as broad, the remainder transverse. *Prothorax* slightly broader than long, the apex much narrower than the base, the sides moderately rounded, broadest about the middle, the apical constriction shallow; the upper surface with very shallow and sparse punctation, which is entirely hidden, and a deep narrow central furrow that does not quite reach either the apex or base. *Elytra* narrowly subelliptical, broadest about the middle, the apices jointly rounded in both sexes, distinctly more pointed behind in the ♀ and with the extreme tip produced slightly downwards; the shallow striæ appear extremely narrow when the scaling is intact, and the punctures are almost hidden; the intervals are flat, dull, and finely rugulose beneath the scaling, each bearing a single row of very short and inconspicuous recumbent scale-like setæ. *Legs* piceous, with the tibiæ and tarsi more reddish.

Length 5-6, breadth 2 mm.

NATAL: Vlakhoek (*H. J. Stiebel*—type). TRANSVAAL: Johannesburg (*Harold A. Fry*).

The Natal specimens were forwarded by the Division of Entomology, Pretoria, with the information that the insects were destroying young leaves on apple-trees.

Very closely allied to *S. (Piazomias) viridanus*, Fhs., which occurs also in the Transvaal; but that species differs in having the prothorax a little longer (at least as long as broad), only slightly narrower at the apex than at the base, and with the surface rugosely sculptured in longitudinal wrinkles; the head is granulose (beneath the scaling) and somewhat striolate on the forehead, the eyes being distinctly shorter and more convex; the rostrum is proportionately broader, slightly widened at the genæ, and with the dorsal outline almost straight; the teeth on the inner edge of the tibiæ are shorter and more slender, &c.

The genus *Sympiezomias*, Fst., has not been previously recorded from Africa, but there seems to be no reason for separating these two insects from the Indian species, despite the difference in the structure of the scales, all of which have a small boss-like elevation in the middle, like those of the Indian genera *Lepidospyris*, Mshl., and *Tylopholis*, Mshl.

#### Subfamily OTIORRHYNCHINÆ.

##### GENUS SPHRIGODES, GERST.

##### *Sphrigodes gunni*, sp. n.

♂. Colour black, with dense dark brown scaling above, variegated with stripes and spots of whitish scales, the lower

surface with uniform pale greenish scaling. The head with pale scales round the eyes and along the dorsal edges of the rostrum; the prothorax with five narrow pale longitudinal stripes; the elytra with the following pale markings:—on interval 2 a stripe running from near the base to a little beyond the middle; interval 4 with a stripe from the base as far as the middle of that on int. 2; int. 6 with a spot close to the base and another before the middle; int. 8 with a broad stripe from the base to beyond the middle, and on a level with the end of this starts an oblique row of longitudinal patches along the top of the declivity on ints. 7, 6, 4, and 2 respectively, that on 6 being usually the longest; a narrower stripe on the apical part of int. 8, which bends round in the form of a hook on to the apex of int. 4; and, finally, a V-shaped mark at the extreme apex on ints. 2 and 10.

*Head* with the coarse close punctation hidden by the scaling; the forehead flat, with an elongate central fovea. *Rostrum* not much longer than its width at the genæ, parallel-sided in the basal half, then abruptly and strongly dilated; the dorsal area flat behind and shallowly impressed in front, its margins subcarinate and the lateral areas on each side almost perpendicular; the greatest distance between the scrobes about equal to the width of the forehead. *Antennæ* with the scape extending well beyond the front margin of the prothorax; the two basal joints of the funicle equal, joints 3 to 5 gradually diminishing in length, and 5 to 7 subequal and slightly longer than broad. *Prothorax* broader than long, broadest near the base, the sides moderately rounded, the apical constriction shallow but distinct; the upper surface evenly convex, without any furrow, and set with close reticulate punctures, each of which is filled with a flat subcircular scale, the narrow shiny interspaces being mostly uncovered. *Elytra* broadly ovate, their greatest width not far from the base, the dorsal outline moderately convex, the posterior declivity very steep; the upper surface with shallow striæ containing rows of deep distant punctures, each of which bears a curved seta that does not rise above the rim of the puncture; the intervals between the striæ broad and flat, closely covered with subcircular convex scales which do not overlap, and between which the shiny integument is often visible; the short curved scale-like setæ are irregularly scattered, and agree in colour with the scales around them. *Legs* with moderately close pale greenish scaling; the hind tibiæ curved so that the upper edge is concave and the lower

convex, and near the apex of the lower edge is an impressed bare area, above which are two very stout bifid spines and some simple spines above them; the other tibiæ have each in the same position a row of three or four simple spines.

Length  $4\frac{1}{2}$ –5, breadth  $2\frac{1}{2}$ –3 mm.

♀. The scaling of the upper surface light grey-brown or brownish grey, the markings that are so conspicuous in the ♂ being only faintly indicated owing to their being very little lighter than the ground-colour.

The only structural differences are that the prothorax is proportionally broader, the apices of the elytra are jointly produced downwards into a beak-like point, and the last ventral segment is pointed at the apex and strongly compressed at the sides so as to form a prominent median ridge. In the ♂ this ventral segment is only slightly convex, broadly rounded at the apex, and bears a small shallow apical impression.

Length  $5\frac{1}{2}$ –6, breadth 3– $3\frac{1}{4}$  mm.

TRANSVAAL: Pretoria (*D. Gunn*).

The male specimens were found on *Acacia caffra* and the females on grass.

This insect would have been referred by Faust to the genus *Embrithes*, Schh., and is congeneric with his *E. plagiatus* and *E. miser* from East Africa. These insects are unquestionably referable to *Sphrigodes*, Gerst., and it is therefore probable that all the other tropical species of *Embrithes* described by Faust should be assigned to that genus.

In the true *Embrithes*, which are confined to the Cape subregion, the scape does not extend beyond the front margin of the prothorax; the rostrum is short and broad, being no longer than its basal width; the surface of the prothorax is uneven, and the upper edge of its basal margin is not carinate.

In *Sphrigodes* the scape extends well beyond the front margin of the prothorax; the rostrum is much longer than its basal width; the surface of the prothorax is smooth, and the upper edge of its basal margin is finely carinate.

#### Subfamily CRYPTORRHYNCHINÆ.

#### GENUS DEIRADOGNATHUS, nov.

*Head* almost concealed from above in repose; the eyes large, narrowed below, the space between them above slightly greater than, and beneath less than, the basal width

of the rostrum. *Rostrum* bent before the middle, the apical half flattened dorso-ventrally, with a deep constriction just in front of the eyes; the scrobes beginning at the middle and not passing actually beneath the rostrum at the base, so that the lower edge of the rostrum (when viewed from the side) is visible beneath the lower margin of the scrobe throughout; the mandibles triangular in cross-section, the outer surface angulate, forming a longitudinal ridge, the cutting-edge shallowly bisinuate. *Antennæ* with the scape not reaching the eye, the two basal joints of the funicle equal, the third only slightly shorter than the second; the club broadly ovate, as long as the two preceding joints, segmented, the margins of the segments almost transverse. *Scutellum* distinct. *Elytra* broader than the thorax, with prominent shoulders and ten striæ. *Legs* moderate, the front pair about as long as the hind; the femora gradually dilated, with a stout tooth, not furrowed beneath, the hind pair not reaching the apex of the elytra; the tibiæ compressed, strongly bent at the base, the lower edge shallowly bisinuate, the upper surface forming a sharp edge, the apex strongly uncinatè, the corbels of the hind pair open; the tarsal claws simple, stout and free. *Sternum* with a deep prosternal furrow, which is not continued on to the mesosternum, the front coxæ being as widely separated as the mid pair and having a rather prominent internal apical angle; the mesepimeron nearly twice the size of the mesepisternum, the intercoxal process lying much below the level of the mid coxæ, and the front margin of the cavity of these coxæ bearing a distinct short projection; the metasternum between the coxæ more than  $1\frac{1}{2}$  times as long as the mid coxæ. *Venter* with segment 2 longer than either 3 or 4, but shorter than the two together, the portion of segment 1 behind the coxa distinctly longer than segment 2, the hind margin of segment 1 straight, the intercoxal process comparatively narrow and conical.

TYPE, *Deiradognathus fasciatus*, sp. n.

This genus falls into Lacordaire's group *Ithyporides*, and in Faust's key to the African genera known to him (Stett. Ent. Zeit. 1893, p. 232) it runs down next to *Haplocorynus*, Fst., which differs in having the femora abruptly clavate and the hind pair extending beyond the apex of the elytra, the second joint of the funicle longer than the first, and the portion of the first ventral segment behind the coxæ shorter than the second segment.

It is also allied to the Eastern *Colobodes*, Schh.; but in this genus segment 2 is as long as 3+4, the femora have a

furrow beneath from the apex to the tooth, the mandibles are rounded externally, the scrobes pass beneath the rostrum in the basal third, and the margins of the joints of the antennal club are very oblique.

*Deiradognathus fasciatus*, sp. n.

♀. Colour black, partly clothed with dense brownish cream-coloured scaling, and elsewhere with leaden-grey scales variegated with blackish brown. The head creamy with brown markings; the entire prothorax creamy, except a large dorsal hexagonal dark brown patch in the centre of the basal half; the elytra with dark scaling, except for a small spot at the base of interval 6 and a broad irregular transverse creamy band behind the middle, which widens outwardly from the suture to the lateral margin and extends along the margin to the base, being almost interrupted near the suture by an oblique leaden-grey patch on intervals 2 and 3; the dark parts of the elytra are leaden grey, with a slight sheen, variegated with velvety dark brown or blackish patches, especially on the elevations; the lower surface is creamy, except the last three ventral segments, which are dark with a row of pale spots down the middle and on each side; the legs creamy with large dark brown patches, the apices of the femora and the lower surface of the tarsi reddish brown.

*Head* dull, with fine and very shallow reticulation and scattered large deep punctures, but the sculpture is entirely hidden by the erect scales, which are so densely packed that only the tips are visible. *Rostrum* convex and almost parallel-sided in the basal third, thence flattened and markedly widening to the apex; in the basal area the punctation is very coarse and confluent at the sides, where the scaling is dense, and the dorsal area bears separated punctures of varying sizes; the flattened anterior part is much more sparsely punctate, and there is an undefined impunctate central stripe. *Prothorax* almost as long as its greatest width, the sides very strongly rounded, broadest before the middle, the base bisinuate and broader than the apex, which is somewhat produced over the head and subtruncate in the middle; across the widest part there is a transverse row of four conical prominences and two others near the front margin, all of which appear to be due to elevations of the integument, but are really produced by bunches of convergent upright scales; the integument itself, which is completely hidden, bears coarse separated

punctures, with the intervals minutely sculptured, and there is a well-marked central carina (visible through the scaling) running from the base for two-thirds of the length. *Scutellum* bearing in front an erect compressed prominence, which is rendered less noticeable by the fact that the rest of the surface is covered by a cushion of erect red-brown scales of the same height. *Elytra* jointly sinuate at the base, very gradually narrowed behind from the shoulders, which are almost right angles, with a deep oblique impression before the apices, which are separated, each bearing a small tubercle; the upper surface with regular rows of large shallow punctures, which are more or less concealed by the scaling, the intervals 1, 3, 5, and 7 slightly more raised; interval 3 with a large boss-like patch of raised scales near the base, a long one close behind it which just reaches the pale band, a rounded one at the hind edge of the band, and a row of much smaller ones from there to the apex; interval 5 with similar but smaller raised patches on a level with the two front ones on 3, a small one in the pale band in front of that on 3, and a large dark boss-like one on the declivity; a row of variable and often indistinct small prominences on interval 7 and on the declivity only of interval 1.

Length 12-14, width 5-5½ mm.

S. RHODESIA: Bulawayo (*F. Eyles*).

*Mecistocerus aloes*, sp. n.

♂ ♀. Colour black, with fairly dense dark brown scaling, irregularly and indefinitely variegated on the elytra with paler scales; the legs greyish brown, all the tibiae having a dark band in the basal half, and the hind femora with a large dark patch about the middle.

*Head* with coarse confluent punctation, each puncture being filled with a broad scale; the forehead without a central furrow. *Rostrum*—(♂) rather coarsely and confluent punctate throughout, with a sharp central carina in the basal half and on each side a broad shallow lateral furrow, which almost reaches the apex, but becomes broader and indefinite in the basal third, and below this in the apical half another shallow punctate furrow, which forms a continuation of the scrobe almost to the apex; (♀) coarsely punctate only at the sides of the basal third, the remainder shiny and with fine scattered punctures, without any central carina, and the upper lateral furrow deeper and more sharply defined than in the ♂. *Antennae* piccous;

inserted at the middle of the rostrum ( $\sigma$ ) or slightly behind it ( $\text{♀}$ ); the scape as long as the first  $3\frac{1}{2}$  joints of the funicle; and the club narrowly elliptical and distinctly longer than the last three joints, which are slightly transverse; joint 2 of the funicle much longer than 1. *Prothorax* as long as broad, shallowly bisinuate at the base, the sides subparallel or slightly diverging from the base to beyond the middle and converging strongly in front; the upper surface with very deeply reticulate punctures throughout and without any definite central carina; the deep honeycomb-like punctures are usually filled with extraneous matter, but each contains to one side a curved scale-like seta, the pale ones, which are arranged roughly in three longitudinal stripes, being much broader than the dark ones. *Elytra* much broader than the prothorax, the shoulders roundly rectangular; the striæ deeply punctate, the divisions between the punctures more or less granuliform, the intervals flat, about as broad as the striæ and set with irregular low granules, which are not visible when the scaling is intact; the scales ovate, dense, and overlapping. *Legs* with the femora almost linear, the hind pair reaching only the middle of the last ventral segment. *Venter* with the hind margin of the first segment shallowly bisinuate.

Length  $7\frac{1}{2}$ – $8\frac{1}{2}$ , breadth  $3$ – $3\frac{1}{2}$  mm.

TRANSVAAL: Pretoria.

Mr. Claude Fuller, Division of Entomology, Pretoria, states that these weevils were found puncturing the leaves of aloe plants.

On account of its linear femora this species falls into the subgenus *Rhadinomerus*, Fst. (*cf.* Heller, Ent. Tidsk. 1904, p. 186), from the previously described species of which it differs in having two lateral furrows on each side of the anterior half of the rostrum.

### Subfamily BARIDINÆ.

#### Genus CYLINDROBARIS, NOV.

*Rostrum* as long as the prothorax, gibbous at the base and tapering strongly to the apex, with the antennæ inserted a little before the middle, and separated from the head by a deep transverse impression; the scrobes uniting beneath the rostrum; the mandibles strongly bidentate. *Antennæ* with the scape straight, broadly clavate, and not reaching the eye; the funicle with the two basal joints longer, 3–7 transverse and gradually widening outwardly, the



seventh free; the first joint of the club as long as the rest together. *Prothorax* as long as broad, very shallowly bisinuate at the base, and with a very slight post-ocular lobe. *Scutellum* large, oblong, and transverse. *Elytra* elongate, subcylindrical, with ten striæ, separately rounded at the apex and leaving the sloping pygidium exposed; the shoulders prominent. *Legs* moderately long; the femora not toothed and but little dilated, the posterior pairs almost linear and not furrowed beneath; the tibiæ strongly bent near the base, otherwise straight, not furrowed, and mucronate at the apex; the tarsal claws rather small and connate at the base. *Sternum*: the prosternum (and still more the mesosternum) well below the level of the metasternum, not furrowed in front of the coxæ; the front and mid coxæ equally separated, the interspace being narrow, not broader than the front tibiæ; the mesosternum with the side-pieces sharply differentiated; the metasternum elongate, the length between the coxæ nearly twice as long as the mid coxæ, the episternum correspondingly long and comparatively narrow. *Venter* with the intercoxal piece rounded and comparatively narrow, not broader than the hind coxa; the length of segment 1 behind the coxa slightly greater than that of 2, the suture between them obliterated in the middle, segment 2 as long as 3 + 4, the hind margins of all three almost straight and only slightly angulate at the sides; the tergites strongly chitinized and coarsely punctate.

TYPE, *Cylindrobaris ornata*, sp. n.

The large size and elongate cylindrical shape of this insect give it an aspect which is hardly suggestive of a Barid, the form being very similar to that of the Calandrid genus *Cyrtorrhinus*, Lac. The close approximation of the mid coxæ, the tapering rostrum, and the almost straight margins of the intermediate ventral segments are all somewhat unusual characters among the true *Barides*, to which the genus belongs.

#### *Cylindrobaris ornata*, sp. n.

General colour black or brownish black, with the head, rostrum, antennæ, legs, apex of venter, and the last four or five abdominal tergites red-brown; occasionally the whole insect is red-brown. The body is decorated with the following markings, formed of dense overlapping lemon-yellow scales:—the whole of the scutellum; a transverse patch near the base of the elytra between striæ 2 and 5, another similar one a little behind it between striæ 6 and 9,

and a broad transverse band at two-thirds from the base extending from stria 1 to 9; a broad stripe down the middle of the prosternum and mesosternum and partly invading the coxæ, the whole of the mesepimeron, a spot at the base of the metepisternum, a small patch at each apical external angle of the metasternum, and a large transverse patch on each side of the first ventral segment.

♂ ♀. *Head* bare, aciculate, with shallow separated punctures. *Rostrum* sharply bent downwards near the base, and from there nearly straight to the apex, without carinæ or sulci, coarsely and confluent punctate from the base to the end of the scrobe, the punctures being very much larger on the sides of the deep compressed basal area and each containing a short linear scale-like seta, the apical area much more finely and sparsely punctate. *Antennæ* with the club of the scape shallowly excavated on its lower face, the side that fits into the scrobe protected by a patch of stiff scale-like bristles; the funicle with joint 1 a little longer than 2, joint 3 quadrate. *Prothorax* very slightly widened from the base to the middle, and there rather abruptly and strongly narrowed to the apex, but without any distinct apical constriction, the front margin truncate dorsally, the dorsal outline rather strongly convex longitudinally and deepest a little behind the middle; the upper surface uniformly and closely covered with fine wavy ridges, which converge obliquely towards the front margin in the anterior half and in the hinder half form roughly concentric curves round the highest point; lying transversely to the ridges are numerous short linear scale-like white setæ. *Elytra* elongate, with the sides shallowly sinuate in the middle, separately rounded at the base, and a little broader than the prothorax at the shoulders, which are obtusely prominent; the upper surface moderately shiny and devoid of scaling (except for the markings described above), with regular deep punctate striæ, of which the 7th and 8th begin only at about one-fourth from the base, and the 10th is broadly interrupted in the middle; the intervals broad and flat, bearing numerous transverse cuts or excisions, each of which contains a short recumbent dark seta, and interval 3 markedly broader at the base than the adjoining ones; the punctures in the striæ contain very short setæ which do not rise above the edges of the stria. *Legs* set with coarse punctures (rounded on the femora and elongate on the tibiæ) bearing white scale-like setæ.

Length 7-9, breadth  $2\frac{1}{2}$ -3 mm.

NYASALAND : Mt. Mlanje (*S. A. Neave*—type). S. RHODESIA : Sebakwe (*D. Dodds*). TRANSVAAL : Pretoria.

EXPLANATION OF PLATE I.

*Sphrigodes gunni*, Marshall,  $\times 9$ .  
*Deiradognathus fasciatus*, Marshall,  $\times 4$ .  
*Cylindrobaris ornata*, Marshall,  $\times 5$ .

---

II.—*Bermudian Species of Donatia* (Tethya).

By BLANCHE BENJAMIN CROZIER.

(Contributions from the Bermuda Biological Station for Research.—No. 77.)

A SEARCH for budding sponges in the waters about Bermuda has revealed, in addition to members of other genera, three species of *Donatia*—*D. lyncurium*, *D. seychellensis*, and two varieties of *D. ingalli*. All, with the exception of *D. lyncurium*, which is comparatively rare, have been obtained in great abundance throughout their respective budding seasons, and kept under observation in their natural situations from September 1st to the end of May. These observations were made as a preliminary to a study, now in progress, of the germ cells of these sponges. I have enjoyed the use of certain equipment belonging to the Bermuda Biological Station, and from the Resident Naturalist of the Station, Dr. W. J. Crozier, I have constantly received assistance. To the Smithsonian Institution I am indebted for the loan of a collection of identified material.

I. *Donatia seychellensis* (E. P. Wright).

During the first week in September *Donatia seychellensis*, in moderate numbers, was found attached to the vegetation in Millbrook and Fairyland Creeks. These creeks are long narrow inlets bordered by mangroves. They are very shallow, and a large part of the bottom is covered with plants, flat-bladed "eel-grass" or turtle-grass, round-bladed grass, and algæ. The sponge attaches itself to the grass by rather slender anchoring filaments; in its most common position upon a round blade it sends out two principal filaments in opposite directions along the length of the blade, and from its base a few tiny hairs straight toward the blade. It may